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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,113	05/31/2006	Koshi Takamura	043888-0469	5363

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EXAMINER	
CHUO, TONY SHENG HSIANG	
ART UNIT	PAPER NUMBER
1795	
MAIL DATE	DELIVERY MODE
01/08/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/581,113	TAKAMURA ET AL.	
	Examiner	Art Unit	
	Tony Chuo	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment/Argument

1. Claims 1-6 are currently pending. Applicant's arguments, see Remarks, filed 10/28/09, with respect to the rejection(s) of claim(s) 1-6 under 35 USC 102 and 103 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, new ground(s) of rejection are made in view of Jansen et al.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jansen et al (US 2002/0127362).

The Jansen reference discloses a battery housing (thin film for a package of a battery) that is made from a two-ply polymer film, wherein the film is composed of a

layer of sealant polymer "71" and a layer of barrier polymer "70", wherein polyethylene and polypropylene are examples of suitable polymers that can be used as the sealant layer and polyethylene terephthalate is an example of a suitable polyester that can be used as the barrier layer (See paragraphs [0033],[0034]). It also discloses that the laminate can be utilized for alkaline batteries (See paragraph [0037]).

Examiner's note: It is position of the examiner that polyethylene and polypropylene are polymer films that inherently have hydrogen gas permeability and polyethylene terephthalate is a polymer film that inherently has gas barrier properties.

5. Claim 6 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamazaki et al (US 6632538).

The Yamazaki reference discloses a battery case (thin film for a package of a battery) that is made from a laminate of heat-adhesive resin layer "3" and a first base film layer "1a", wherein polyethylene and polypropylene are examples of suitable polymers that can be used as the heat-adhesive resin layer and polyethylene terephthalate is an example of a suitable polyester that can be used as the first base film layer (See column 5, lines 49-53 and column 9, lines 27-29).

Examiner's note: It is position of the examiner that polyethylene and polypropylene are polymer films that inherently have hydrogen gas permeability and polyethylene terephthalate is a polymer film that inherently has gas barrier properties. In addition, the recitation "for a package of an alkaline battery" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a

process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (JP 63-138668) in view of Jansen et al (US 2002/0127362).

The Matsumoto reference discloses a thin air battery comprising: a power generating element composed of a laminate in which air diffusing paper "2", a polymer film (water repellent film), a positive electrode, a separator "4", and a negative electrode "5" are stacked in this order, and an electrolyte is contained in the positive electrode, separator, and negative electrode; and a casing (package) composed of a first sheet layer "1b" having air inlet holes and covering the positive electrode side of the power generating element, a third sheet layer "6" covering the negative electrode side of the power generating element, and a second sheet layer "7" located in the peripheral portion between the first sheet layer and the third sheet layer and joined to the two sheet layers (See Abstract and Drawing 3).

However, Matsumoto et al does not expressly teach a first sheet layer, a second sheet layer, and a third sheet layer, each comprising a thin film formed by stacking at least an alkali-resistant polymer film having hydrogen gas permeability and a polymer film having gas barrier properties, wherein in each of the first sheet layer and the third sheet layer, the polymer film having hydrogen gas permeability is disposed on the internal surface side, wherein the polymer film having hydrogen gas permeability is composed of a material selected from the group consisting of polyethylene, polypropylene, and polysulfone; wherein the polymer film having gas barrier properties is polyethylene naphthalate, polyethylene terephthalate, polyphenylene sulfide, polyamide, polyvinyl chloride, ethylene-vinyl alcohol copolymer, ethylene-vinyl acetate copolymers, and ionomer resins; wherein the polymer film having gas barrier properties is composed of a fluorine-containing polymer material; wherein at least one of the first sheet layer, second sheet layer, and third sheet layer comprises a metal sheet layer that is not corroded by aqueous alkaline solutions; and a lead of the air electrode and a lead of the negative electrode drawn out of the package from between the second sheet layer and the first sheet layer or third sheet layer.

The Jansen reference discloses a battery housing that is made from a film that includes a sealant layer "101", a first layer of metal foil "103" (metal sheet layer not corroded by aqueous alkaline solutions), and a protective layer "105", wherein polyethylene and polypropylene are examples of suitable polymers that can be used as the sealant layer and polyester such as polyethylene terephthalate, polyamides, polyvinyl chloride, fluoroplastics, polyphenylene sulfide, ethylene vinyl alcohol, and

ethylene vinyl acetate are examples of suitable materials that can be used as the protective layer, wherein the sealant layer is disposed on the inner surface side (See paragraphs [0034],[0035] and Figure 7 and 9). It also discloses battery leads that extend through the housing (See paragraph [0036] and Figure 7). It also discloses that the battery housing can be utilized for zinc-air batteries (See paragraph [0037]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Matsumoto battery to include a first sheet layer, a second sheet layer, and a third sheet layer, each comprising a thin film formed by stacking at least an alkali-resistant polymer film having hydrogen gas permeability and a polymer film having gas barrier properties, wherein in each of the first sheet layer and the third sheet layer, the polymer film having hydrogen gas permeability is disposed on the internal surface side, wherein the polymer film having hydrogen gas permeability is composed of a material selected from the group consisting of polyethylene, polypropylene, and polysulfone; wherein the polymer film having gas barrier properties is polyethylene naphthalate, polyethylene terephthalate, polyphenylene sulfide, polyamide, polyvinyl chloride, ethylene-vinyl alcohol copolymer, ethylene-vinyl acetate copolymers, and ionomer resins; wherein the polymer film having gas barrier properties is composed of a fluorine-containing polymer material; wherein at least one of the first sheet layer, second sheet layer, and third sheet layer comprises a metal sheet layer that is not corroded by aqueous alkaline solutions; and a lead of the air electrode and a lead of the negative electrode drawn out of the package from between the second sheet layer and the first sheet layer or third sheet layer in order to incorporate the advantages

of combining a chemically resistant polymer and a relatively low melting point heat-sealable polymer into a single laminate for use in battery housings and to utilize leads to extract electrical energy from the battery (See paragraph [0009]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Chuo whose telephone number is (571)272-0717. The examiner can normally be reached on M-F, 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC

/Jonathan Crepeau/
Primary Examiner, Art Unit 1795